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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,854	06/20/2005	Sander Jurgen Roosendaal	NL02 1383 US	6521

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INTELLECTUAL PROPERTY & STANDARDS
370 W. TRIMBLE ROAD MS 91/MG
SAN JOSE, CA 95131

EXAMINER

NGUYEN, LAUREN

ART UNIT	PAPER NUMBER
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2871

MAIL DATE	DELIVERY MODE
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09/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,854

Applicant(s)

ROOSENDAAL, SANDER
JURGEN

Examiner

Lauren Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of applicant's amendment filed on 05/21/2007.

Claims 1-10 were canceled and claims 11 were added. Thus, claims 1-11 are pending for examination.

Response to Arguments

1. Applicant's arguments with respect to **claim 1** have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 07/03/2007 was filed after the mailing date of the instant application on 06/20/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. **Claim 2** objected to because of the following informalities: the phrase 'the driving means' lacks of antecedent basis. The applicant is required to explain what is being claimed. As best understood, 'the driving means' should be --the driver--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. **Claims 1-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim (U.S. Publication Number 2002/0036732)** in view of **Lu et al. (U.S. Patent Number 6,972,812)**.

6. With respect to **claim 1**, as shown in figures 6-8, **Kim** discloses a Liquid Crystal Display (LCD) device, having a liquid crystalline cell (see at least paragraph 0003, lines 1-4) at least partially arranged as a reflective liquid crystalline cell (600a, figure 6), and a driver (700) that is configured to drive the liquid crystalline cell to provide:

- a minimum drive voltage (the backlight 700 turns off, 0V), and
- a maximum drive voltage that affects a bright state of the LCD only (the backlight 700 turns on, voltage applied is greater than 0V),
- an active mode allowing for normal use of the device (the backlight 700 turns on),
- and a standby mode for reducing power consumption of the device (the backlight 700 turns off)
- wherein the driver is configured to switch from the active mode to the standby mode by reducing only the maximum drive voltage (the backlight is turned on and off).

Kim discloses the limitations as shown in the rejection of **claim 1** above. **Kim** does not disclose a normally black LC cell. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the LCD of **Kim** with the teaching of **Lu et al.** because such modification would provide LCD devices with higher contrast, higher response speed, and excellent viewing angle (**Lu et al.**, see at least column 1, lines 22-25 and lines 44-46).

7. With respect to **claim 2**, as shown in figures 6-8, **Kim** discloses a maximum drive voltage generated by the driver in the standby mode (the backlight 700 turns off, 0V) is at least 20 percent

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lower than the maximum drive voltage generated by the driver in the active mode (the backlight 700 turns on, 0V would be lower than any voltage applied to the backlight).

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05.

8. With respect to **claim 3**, as applied to **claim 1** above and shown in figures 6-8, **Kim** discloses a frame frequency of a drive signal generated by the driver in the standby mode (the backlight 700 turns off, 0V) is lower than the frame frequency of the drive signal generated by the driver in the active mode (the backlight 700 turns on. The backlight has frequency with associated frame frequency, therefore, the frame frequency of a drive signal generated by the driver in the standby mode is 0, and the frame frequency of the drive signal generated by the driver in the active mode is higher than 0).

9. With respect to **claim 5**, as applied to **claim 1** above and shown in figures 6-8, **Kim** discloses the liquid crystalline cell is a transflective liquid crystalline cell (600a and 600b, figure 6; paragraph 0003, lines 1-4).

10. With respect to **claims 4 and 6**, as applied to **claims 1 and 5** above, **Lu et al.**, in at least column 3, lines 1-2, figures 1 and 2, discloses the liquid crystalline cell includes a layer of a vertically aligned liquid crystalline material.

11. With respect to **claim 7**, as applied to **claim 6** above and shown in figures 6-8, **Kim** discloses the layer of the liquid crystalline material is arranged between a first polarizer (510) and a second polarizer (410) being oriented at a right angle with the first polarizer (figure 8). **Kim**

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discloses the limitations as shown in the rejection of **claim 7** above. **Kim** does not disclose the vertically aligned liquid crystalline material. However, **Lu et al.**, in at least column 1, lines 15-17, discloses the vertically aligned liquid crystalline material. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the LCD of **Kim** with the teaching of **Lu et al.** because such modification would provide LCD devices with higher contrast, higher response speed, and excellent viewing angle (see at least column 1, lines 22-25 and lines 44-46).

12. With respect to **claim 8**, as applied to **claim 5** above and shown in figures 6-8, **Kim** discloses a lamda/4 compensation layer (520 or 420) is arranged adjacent at least reflective parts of the liquid crystalline cell.

13. With respect to **claim 9**, as applied to **claim 6** above and shown in figures 6-8, **Kim** discloses a cell gap for a transmissive sub-pixel (d_2) of the liquid crystalline cell is 2 times a cell gap for a reflective sub-pixel (d_1) of the liquid crystalline cell ($d_2 = 2 * d_1$; see at least paragraph 0050, lines 15-16).

14. With respect to **claim 10**, as applied to **claim 9** above, **Kim** discloses the claimed invention except for the cell gap for the transmissive sub-pixel is substantially 1.8 times the cell gap for the reflective sub-pixel. However, **Kim**, in at least paragraph 0050, lines 18-20, discloses the cell gap for the transmissive sub-pixel is about 1.8 to 2.5 times the cell gap for the reflective sub-pixel.

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2131.05.

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15. With respect to **claim 11**, as applied to **claim 1** above and shown in figures 6-8, **Kim** discloses a lamda/4 compensation layer (520 or 420) is arranged adjacent at least reflective parts of the liquid crystalline cell.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

17. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lauren Nguyen whose telephone number is (571) 270-1428. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lauren Nguyen

September 10, 2007


ANDREW SCHECHTER
PRIMARY EXAMINER